

DEVELOPMENT

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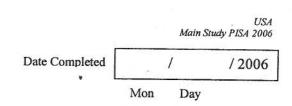
CO-OPERATION

ECONOMIC

FOR

ORGANISATION

OECD Program for International Student Assessment 2006



SCHOOL QUESTIONNAIRE

School Name				
School ID			11	لــــا
		-		
Multiple coding Office Use Only			T	
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Learning for Living

Project Consortium:

Australian Council for Educational Research (ACER)

Netherlands National Institute for Educational Measurement (CITO)

Educational Testing Service (ETS, USA)

National Institute for Educational Policy Research (NIER, Japan)

This questionnaire asks for information including:

- The characteristics of the school;
- The student body;
- The school's resources;
- Staffing;
- The organization of the school;
- The environment in the curriculum;
- · Career guidance and preparation of students for further education.

This information helps illustrate the similarities and differences between groups of schools in order to better establish the context for students' test results. For example, the information provided may help to establish the impact of resource distribution on student achievement – both within and between countries.

What is meant by "science?"

PISA is an international study, and in order to make comparisons between students and schools in different countries, it is necessary to have a common definition of 'science'. For the purpose of this questionnaire, science refers only to the core science subjects of physics, chemistry, earth science and biology either taught in your curriculum as separate science subjects, or taught within a single 'integrated-science' subject. It does NOT include related subjects such as engineering, technology, mathematics, psychology, economics, nor possible earth science topics included in geography courses. If in doubt as to whether a school subject other than physics, chemistry, earth science, biology or integrated-science is science or not, treat the subject as NOT being science.

The questionnaire should be completed by the principal or designate. It should take about 30 minutes to complete.

If you do not know an answer precisely, your best estimate will be adequate for the purposes of the study.

A number of questions refer to tenth grade. If you do not have a tenth grade at your school then answer these questions for grade nine (or grade eight if you do not have grades nine or ten).

Your answers will be kept confidential. They will be combined with answers from other principals to calculate totals and averages in which no one school can be identified.

SECTION A: THE STRUCTURE AND ORGANIZATION OF THE SCHOOL

SC	HOOL	
Q1	As of September 25, 2006 what was the total school enrol (number of students)?	lment
	(Please write a number in each line. Write 0 (zero) if there are none)	
	a) Number of boys:	
	b) Number of girls:	
Q2	ls your school a public or a private school?	
	(Please check only one box)	
	A public school	
	A private school	

Q3 About what percentage of your total funding for a typical school year comes from the following sources?

(Please write a number in each row. Write 0 (zero) if no funding comes from that source)

		%
a)	Government (includes departments, local, regional, state and national)	(Marie de la constante de la
b)	Student fees or school charges paid by parents (e.g., tuition, fees for books, etc.)	-
c)	Benefactors, donations, bequests, sponsorships, parent fund raising	
d)	Other	
	Total	100%

Q4 Do you have the following grade levels in your school?

(Please check one box in each row)

	Yes	No
a) Grade 1		
b) Grade 2	$\square_{_1}$	
c) Grade 3		
d) Grade 4		
e) Grade 5		\square_{2}
f) Grade 6	\Box_{i}	
g) Grade 7		
h) Grade 8	\Box_1	
i) Grade 9	\Box_{i}	
j) Grade 10		\square_{2}
k) Grade 11		
l) Grade 12	\Box_{i}	\square_{2}
n) Ungraded school		

Q5	Approximately what percent of students a were eligible for free- or reduced-price lun National School Lunch Program?		
	(Please write a number on the line. Write 0 (zero)	if there are n	one)
1	Percent of students eligible:		
	-		
Q6	About what percentage of students in you grade, at these levels, last academic year?	-	peated a
	(Please write a number in each row. Write 0 (ze grade. Check the 'not available' box if the leve school)		
		%	Level not available in this school
	a) The approximate percentage of students repeating a grade at the middle/junior high school level (grades7-9) in this school last year was:		
	b) The approximate percentage of students repeating a grade at the high school level (grades 10-12) in this school last year was:		П
			996

Q7 What is the average size of English classes in tenth grade in your school?

(Please check only one box)		w ,	- *	
15 students or fewer				14
16-20 students				
21-25 students				
26-30 students				
31-35 students	05			3 6 0
36-40 students				
41-45 students	07			
46-50 students	08			
More than 50 students				

Q8		Which of the following best describ your school is located?	oes the co	mmunity i	n which
-		(Please check only one box)		*	
		A village, hamlet or rural area (fewer than 3,000	0 people)		s
		A small town (3,000 to about 15,000 people)		\square_2	
		A town (15,000 to about 100,000 people)		3	
		A city (100,000 to about 1,000,000 people)		4	1 60 26
		A large city (with over 1,000,000 people)			
Q9		Some schools organize instruction did different abilities. What is your scho students in tenth grade?			
		(Please check one box in each row)			
			For all subjects	For some subjects	Not for any subject
	a)	Students are grouped by ability into different classes			\square_3
	b)	Students are grouped by ability within their classes			\square_3
		gg and the state of the state o			3

SECTION B: STAFFING

Q10		How many of the following are on the staff of yo	ur scho	ol?
		Include both full-time and part-time teachers. A full-time teacher is em, the time as a teacher for the full school year. All other teachers should be		
		(Please write a number in each space provided. Write none)	0 (zero)	if there is
		- A	full time	Part time
	a)	Teachers in TOTAL	-	
		*		
	b)	Teachers fully certified by the state in the main assignment field		
	c)	Teachers with a bachelor's degree		
Q11		In the last academic year, did you fill all vacant t science teaching positions at your school?	enth gra	ade
		See the preliminary note on the definition of science inside the fr teacher is defined as a teacher of the subject(s) which meet this dej		A science
		(Please check only one box)		
		Not applicable (we had no vacant science teaching positions to be filled)		
		Yes (we filled all vacant science teaching positions, either with newly a staff or by reassigning existing staff)	ppointed	
		No (we could not fill one or more vacant science teaching positions)		\square_3

Q12 Regarding your school, who has a considerable responsibility for the following tasks?

(Please check as many boxes as appropriate in each row)

		Principal or teachers	Local school council, committee, or board	State education agency	U.S. Department of Education
a)	Selecting teachers for hire	$\square_{\mathbf{i}}$		\square_1	\square_1
b)	Firing teachers			,	
c)	Establishing teachers' starting salaries	\Box_{ι}	$\Box_{\mathbf{i}}$	$\Box_{\mathbf{i}}$	
d)	Determining teachers' salaries increases		$\Box_{\mathbf{i}}$		
e)	Formulating the school budget	\square_1	\Box_{1}	\Box_1	
f)	Deciding on budget allocations within the school	\Box_{ι}	$\square_{_{1}}$	\Box_1	
g)	Establishing student disciplinary policies	\Box_{i}			
h)	Establishing student assessment policies				
	Approving students for admission to the school		$\square_{\mathbf{i}}$		
	Choosing which textbooks are used	$\Box_{\mathbf{i}}$	$\square_{\mathbf{i}}$	\Box_{1}	
k)	Determining course content				$\square_{\scriptscriptstyle 1}$
	Deciding which courses are offered		\Box_{1}		

Q13 Regarding your school, which of the following bodies exert a direct influence on decision making about staffing, budgeting, instructional content and assessment practices?

(Please check as many boxes as apply)

Area of influence

			C4 CC	D. 1-4	Instructional	Assessment
	-		Staffing	Budgeting	content	practices
	education a	nte or national authorities (e.g., ts of Education)				
	Local school				\square_{i}	
c)	Parent grou	ps				
	Teacher gro (e.g. staff a curriculum union)					□,
	Student gro (e.g. studen youth organ	t association,	\Box_{ι}			$\Box_{\mathbf{i}}$
1350	External ex boards	amination	$\Box_{_{1}}$		$\square_{\mathbf{i}}$	

SECTION C: THE SCHOOL'S RESOURCES

			Number	
Q14a	About how many computers are available in the school altogether?		,	
	(Please write 0 (zero) if there are none)	2		
Q14b	About how many of these computers are available for instruction?	_		
Q14c	About how many computers in the school are connected to the Internet/World Wide Web?			

Q15 Is your school's capacity to provide instruction hindered by any of the following?

(Please check one box in each row)

		Not at all	Very little	To some extent	A lot
a)	A lack of qualified science teachers	\square_{i}	$\square_{_{2}}$		\square_{4}
b)	A lack of qualified mathematics teachers	$\square_{_{1}}$	\square_{2}	\square_3	\square_{4}
c)	A lack of qualified English teachers	$\square_{_1}$	\square_{2}	\square_3	\square_{4}
d)	A lack of qualified teachers of other subjects	$\square_{_{1}}$	\square_{2}	\square_3	· 🔲
e)	A lack of laboratory technicians		\square_{2}	\square_3	\square_{4}
f)	A lack of other support personnel			\square_3	\square_{4}
g)	Shortage or inadequacy of science laboratory equipment	\square_1		\square_3	
h)	Shortage or inadequacy of instructional materials (e.g. textbooks)			\square_3	
i)	Shortage or inadequacy of computers for instruction	\Box_1	\square_{2}		4
j)	Lack or inadequacy of Internet connectivity			\square_3	\square_4
k)	Shortage or inadequacy of computer software for instruction			\square_3	4
1)	Shortage or inadequacy of library materials		\square_{2}	\square_3	\square_{4}
m)	Shortage or inadequacy of audio-visual resources			\square_3	\square_{4}

SECTION D: ACCOUNTABILITY AND ADMISSION PRACTICES

This set of questions explores aspects of the school's -Q16 accountability to parents. (Please check one box in each row) Yes No a) Does your school provide information to parents of students in tenth grade on their child's academic performance relative to other students in tenth grade in your school? b) Does your school provide information to parents of students in tenth grade on their child's academic performance relative to national or regional benchmarks? c) Does your school provide information to parents on the academic performance of students in tenth grade as a group relative to students in the same grade in other schools? Q17 Which statement below best characterizes parental expectations towards your school? (Please check only one box) There is constant pressure from many parents, who expect our school to set very high academic standards and to have our students achieve them Pressure on the school to achieve higher academic standards among students comes from a minority of parents Pressure from parents on the school to achieve higher academic standards among students is largely absent

Q18		following ways?	the	
		Achievement data include aggregated school or grade-level t grades, or graduation rates.	est sco	res oi
		(Please check one box in each row)		
			Yes	No
	a)	Achievement data are posted publicly (e.g. in the media)	$\square_{_{1}}$	
	b)	Achievement data are used in evaluation of the principal's performance		
	c)	Achievement data are used in evaluation of teachers' performance	\Box '.	
	d)	Achievement data are used in decisions about instructional resource allocation to the school		
	e)	Achievement data are tracked over time by an administrative authority (such as a district, state, or national education agency)		\square_{2}
Q19		We are interested in the options parents have when chooschool for their children. Which of the following statemed describes the schooling available to students in your (Please check only one box)	ents b	est
		There are two or more other schools in this area that compete for our stud	ents	
		There is one other school in this area that competes for our students		
		There are no other schools in this area that compete for our students		\square_3
				(3)

Q20 How much consideration is given to the following factors when students are admitted to your school?

(Please check one box in each row)

		Prerequisite	High priority	Considered	Not considered
a) Re	sidence in a particular area			\square_3	4
	ident's academic record cluding placement tests)				4
(E)	commendation of feeder				. 4
ins	rents' endorsement of the structional or religious ilosophy of the school	. , ,		\square_3	4
	adent's need or desire for a ecial program				4
me	tendance of other family embers at the school ast or present)	\Box_{i}		\square_3	\square_{4}

SECTION E: SCIENCE AND THE ENVIRONMENT

(Please check one box in each row)

e) Excursions and field trips

Q21 Is your school involved in any of the following activities to promote engagement with science among students in tenth grade?

a) Science clubs

b) Science fairs

Science competitions other than
c) School science fairs (e.g., Science
Olympiads, Siemens Westinghouse
Competition, etc.)

c) Extracurricular science projects
(including research)

 \Box ,

Q22 Where do topics on the environment sit in the curriculum received by students in tenth grade at your school?

Environmental topics include all topics related to environmental science. These may include environmental issues such as pollution or the degradation of the environment. Relationships between organisms, biodiversity and conservation of resources would also be examples of environmental topics.

(Please check one box in each row. If there are no topics on the environment in the curriculum received by students in tenth grade please check "No" in all four rows)

		Yes	No
a)]	In a specific environmental studies course		
1	In the natural sciences courses – for example as part of biology, chemistry, physics, earth science or within an integrated science course	\Box_{i}	
c) A	As part of a geography course		${\color{red}\square_2}$
d) .	As part of another course		

Q23 Does your school organize any of the following activities to provide opportunities to students in tenth grade to learn about environmental topics?

(Please check one box in each row)

Yes No

a) Outdoor education (e.g., field trips to natural areas)

b) Trips to museums

c) Trips to science and/or technology centers

d) Extracurricular environmental projects (including research)

e) Lectures and/or seminars (e.g.

guest speakers)

SECTION F: CAREERS AND FURTHER EDUCATION

Q24		How often would students in tenth to participate in the activities belo schooling?			
		(Please check one box in each row)			
			Never	Once a year	More than once a year
	a)	JoБ fairs	$\square_{_1}$		\square_3
	b)	Lectures (at school) by business or industry representatives			
	c)	Visits to local businesses or industries			\square_3
Q25		In your school, about how many s receive some training within local activities during the normal school	businesses	as part of	of school

Q26	Thinking about the curriculum received by students in tenti grade, which statement below is closest to your view?	1
5.	(Please check only one box)	
	Business and industry have no influence on the curriculum	
	Business and industry have a minor or indirect influence on the curriculum \square_2	
	Business and industry have a considerable influence on the curriculum \square_3	
Q27	To what extent do you feel that teachers in your school concentrate on developing in students the skills and knowledge that will help them progress towards science-related careers?	
	Science-related career has been used here to include careers that invoce considerable amount of science but are beyond the traditional ideal scientist as someone who works in a laboratory or academic environ (like a nuclear physicist). As such, a science-related career is not only in physics, chemistry or biology. Any career that involves postsecone education in a scientific field is considered science-related. There careers like engineer (involving physics), weather forecaster (involving earth science), optician (involving biology and physics), and me doctors (involving the medical sciences) are all examples of sciencelated careers.	of a men one dary efore lving dica
	(Please check only one box)	
	These skills and knowledge are not a major part of teachers' pedagogical activities	\Box_{i}
	These skills and knowledge are integrated into teachers' pedagogical activities, but they are not emphasized	
	These skills and knowledge are a focus of teachers' pedagogical activities	\square_3

Q28	To what extent do you feel that teachers in your school concentrate on developing in students the skills and knowledge that will help them in postsecondary education?	
	(Please check only one box)	
	These skills and knowledge are not a major part of teachers' pedagogical activities	$\Box_{\mathbf{l}}$
	These skills and knowledge are integrated into teachers' pedagogical activities, but they are not emphasized	
	These skills and knowledge are a focus of teachers' pedagogical activities	\square_3
Q29	Who has the main responsibility for career guidance of students in tenth grade at your school?	
	(Please check only one box)	
	Not applicable, career guidance is not available in this school	$\square_{\mathbf{l}}$
	All teachers share the responsibility for career guidance	
	Specific teachers have the main responsibility for career guidance	- 3
	We have one or more specific career guidance counsellors employed at school	
	We have one or more specific career guidance counsellors who regularly visit the school	\square_{5}

230	If career guidance is available at your school, which statements below best describes the situation for tenth grade?							
	Skip this question if career guidance is not available at you (Please check only one box)	r school.						
	Career guidance is sought voluntarily by students	\Box_{i}						
2	Career guidance is formally scheduled into students' time at school							

· Thank you for your co-operation



Learning

for Living



OECD Program for International Student Assessment 2006

Date of Test / / 2006

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STUDENT QUESTIONNAIRE

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Month	Year
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Project Consortium:

Australian Council for Educational Research (ACER)

Netherlands National Institute for Educational Measurement (CITO)

Educational Testing Service (ETS, USA)

National Institute for Educational Policy Research (NIER, Japan)

In this booklet you will find questions about:

- You and your family
- Your views on various issues related to science
- The environment
- Careers and science
- Learning time
- Teaching and learning science

Please read each question carefully and answer as accurately as you can. In the test you usually circled your answers. For this questionnaire, you will normally answer by checking a box. For a few questions you will need to write a short answer.

If you make a mistake when checking a box, cross out or erase your mistake and mark the correct box. If you make an error when writing an answer, simply cross it out and write the correct answer next to it.

In this questionnaire, there are no right or wrong answers. Your answers should be the ones that are right for you.

You may ask for help if you do not understand something or are not sure how to answer a question.

Your answers will be combined with others to make totals and averages in which no individual can be identified. All your answers will be kept confidential.

SECTION 1: ABOUT YOU

Q1	What grade are you in?
	-
	grade

Month

Q2	On what date were you born?
	(Please write the month, day and year you were born)
	19

Day

Year

		ST04N01
Q3a	Which best describes you?	
	(Please check only one box)	5
	I am Hispanic or Latino	$\square_{_{\mathbf{l}}}$
	I am <u>not</u> Hispanic or Latino	$\square_{\mathbf{z}}$
		ST04N02
Q3b	Which of these categories best indicates your race?	*
	(Please check all that apply)	
	White	\Box_{1}
	Black or African American	
	Asian	$\square_{_1}$
	American Indian or Alaska Native	
	Pacific Islander	\square_{1}
Q4	Are you female or male?	
	Female Male	

						AND ASSESSED.			NUMBER OF STREET		MATERIAL PROPERTY.	<u> Zimprowen</u>	Real Explana		200000	200000	Share of Street	0,700,000
-		CONTRACTOR DESIGNATION		NO. 100.00	THE RESERVE AND ADDRESS.	7 400 8	ST SERVICE.	Special Co.		# 100 VS	ANDREAS NO. 1	B E	1000 W	F 'V 80	8 may 1939	43040	200	87 E emmi
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In this section you will be asked some questions about your family and your home.

Some of the following questions are about your mother and father or those persons who are like a mother or father to you — for example, guardians, step-parents, foster parents, etc.

If you share your time with more than one set of parents or guardians, please answer the following questions for those parents/guardians you spend the most time with.

	4	
Q5a	What is your mother currently doing?	
	(Please check only one box)	=
	Working full-time for pay	
	Working part-time for pay	
	Not working, but looking for a job	\square_3
	Other (e.g., home duties, retired)	4
Q5b	What is your mother's main job? (e.g., school teacher, food worker, sales manager)	
	(If she is not working now, please tell us her last main job)	
	Please write in the job title.	

(What does your mother do in her main job? (e.g., teaches high school students, helps prepare meals in a restaurant, manages a sales team)					
	Please use a sentence to describe the ob.	kind of work she do	es or did in that			
	What is the highest level of school completed by your mother?	ooling (not including	ng college)			
	f you are not sure which box to choose for help.	ose, please ask the te.	st administrator			
(Please check only one box)					
	Completed grade 12 (high school diploma r GED)					
C	Completed grade 9		ē			
C	Completed grade 6					
S	he completed grade 5 or less	$\square_{\mathfrak{s}}$				

Q7 Does your mother have any of the following qualifications?

ı		
	What is your father currently doing?	
	(Please check only one box)	•
	Working full-time for pay	[
	Working part-time for pay	[
	Not working, but looking for a job	Γ
	-	
	Other (e.g., home duties, retired)	
		ā a
)	What is your father's main job? (e.g., school teacher, food worker, sales manager)	
	(If he is not working now, please tell us his last main job)	
	Please write in the job title.	
	What does your father do in his main joh?	
•	What does your father do in his main job? (e.g., teaches high school students, helps prepare me restaurant, manages a sales team)	eals in a
	(e.g., teaches high school students, helps prepare me	
	(e.g., teaches high school students, helps prepare me restaurant, manages a sales team) Please use a sentence to describe the kind of work he do	
	(e.g., teaches high school students, helps prepare me restaurant, manages a sales team) Please use a sentence to describe the kind of work he do	
	(e.g., teaches high school students, helps prepare me restaurant, manages a sales team) Please use a sentence to describe the kind of work he do	
	(e.g., teaches high school students, helps prepare me restaurant, manages a sales team) Please use a sentence to describe the kind of work he do	
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	(e.g., teaches high school students, helps prepare me restaurant, manages a sales team) Please use a sentence to describe the kind of work he do	
	(e.g., teaches high school students, helps prepare me restaurant, manages a sales team) Please use a sentence to describe the kind of work he do	

Мa	completed by your father?	oling (n	ot inclu	aing co	iiege,	,
	If you are not sure how to answer administrator for help.	this -qu	estion, p	lease asl	the	test
	(Please check only one box)				ā	
	Completed grade 12 (high school diploma or GED)					
	Completed grade 9	\square_3				
	Completed grade 6	\square_{4}				
	He completed grade 5 or less	$\Box_{\mathfrak{s}}$				
Q10	Does your father have any of the	followi	ng quali	fication	s?	= 1,
3	If you are not sure which box to choo for help.	se, pleas	e ask the	test adm	inistro	ator
	(Please check one box in each row)					
		Yes	No			
	Bachelor's (4-year college degree), a) master's, doctoral, or professional degree such as medicine or law					
	b) Associate's degree (2-year degree from community college)					
	Vocational or technical certificate/diploma c) after high school (such as cosmetology or auto mechanics)					w

Q11a In what country were you and your parents born? (Please check one answer in each column) You Mother Father United States* *For this question, "United States" refers to the 50 states, District of Columbia, and U.S. military bases abroad. Other country If you were NOT born in the United States, how old were you Q11b when you arrived in the United States? If you were less than 12 months old, please write zero (0) years What language do you speak at home most of the time? Q12 (Please check only one box) English Spanish Other language

Q13 Which of the following are in your home?

(Please check one box in each row)

		Yes	No
a)	A desk to study at		
b)	A room of your own		
c)	A quiet place to study	\square_{ι}	
d)	A computer you can use for school work	\Box_{i}	
e)	Educational software	$\square_{_1}$	
f)	A link to the Internet		
g)	Your own calculator	\square_{i}	\square_{2}
h)	Classic literature (e.g., Shakespeare)	\Box_{i}	
i)	Books of poetry		
j)	Works of art (e.g., paintings)	$\Box_{\mathbf{i}}$	
k)	Books to help with your school work	\square_{1}	\square_{2}
1)	A dictionary		
m)	A dishwasher		$\begin{bmatrix} \ \ \end{bmatrix}_2$
n)	A DVD or VCR player		
o)	A guest room	\Box_{i}	
p)	A high-speed internet connection	$\square_{\mathbf{i}}$	\square_{2}
q)	An iPod or MP3 player	$\square_{_1}$	

Q14 How many of these are there at your home?

(Please check only one box in each row)

			2	None	One	Two -	Three or more
	a)	Cellular phones				\square_3	\square_{4}
	b)	Televisions		\Box_1			\square_{4}
	c)	Computers				\square_3	\square_{4}
	d)	Cars		$\square_{_{1}}$		\square_3	
	e)	Rooms with a bath or shower	*	$\square_{\mathbf{i}}$	\square_{2}	\square_3	\square_{4}
Q15		How many books are ther	e in you	r home?			
		There are usually about 40 magazines, newspapers, or you			helving.	Do not	include
		(Please check only one box)					
		0-10 books	$\square_{\scriptscriptstyle 1}$				
		11-25 books	\square_{2}				
		26-100 books	\square_3				
		101-200 books	4				
		201-500 books					
		More than 500 books	\square_{6}				

SECTION 3: YOUR VIEWS ON SCIENCE

This section asks about your views on various issues relating to science. Science refers to any topics that you might encounter in school, or outside of school (for example on television) that relate to space science, biology, chemistry, earth science or physics.

Q16 How much do you agree with the statements below?

(Please check only one box in each row)

	Strongly agree	Agree	Disagree	Strongly disagree
a) I generally have fun when I am learning science topics	$\square_{_{1}}$	\square_{2}		
b) I like reading about science	$\square_{_{1}}$		\square_3	
c) I am happy doing science problems			\square_3	
d) I enjoy acquiring new knowledge in science	ce 🔲	\square_{2}	\square_3	4
e) I am interested in learning about science	$\Box_{\mathbf{i}}$		\square_3	\square_{4}

Q17 How easy do you think it would be for you to perform the following tasks on your own?

		I could do this easily	I could do this with a bit of effort	I would struggle to do this on my own	I couldn' do this
a)	Recognize the science question that underlies a newspaper report on a health issue			\square_3	
b)	Explain why earthquakes occur more frequently in some areas than in others		\square_2	\square_3	4
c)	Describe the role of antibiotics in the treatment of disease	\Box_{i}	$\square_{\mathtt{2}}$	\square_3	\square_4
d)	Identify the science question associated with the disposal of garbage	$\square_{\scriptscriptstyle 1}$	$\square_{\mathbf{z}}$	\square_3	\square_{4}
e)	Predict how changes to an environment will affect the survival of certain species	$\Box_{\mathbf{i}}$		\square_3	\square_{4}
f)	Interpret the scientific information provided on the labels of food items	\square_{1}	\square_{2}	\square_3	$\square_{\scriptscriptstyle 4}$
g)	Discuss how new evidence can lead you to change your understanding about the possibility of life on Mars			\square_3	
h)	Identify the better of two explanations for the formation of acid rain		\square_{2}		\square_{4}

Q18 How much do you agree with the statements below?

8.**		Strongly agree	Agree	Disagree .	Strongly disagree
a)	Advances in science and technology usually improve people's living conditions	$\square_{\mathbf{i}}$		\square_3	
b)	Science is important for helping us to understand the natural world			\square_3	
c)	Some concepts in science help me see how I relate to other people				· 🔲 ₄
d)	Advances in science and technology usually help improve the economy	$\Box_{_{1}}$	\square_{2}		ل ا
e)	I will use science in many ways when I am an adult	$\square_{_{1}}$			[] ₄ .
f)	Science is valuable to society	$\square_{\scriptscriptstyle 1}$	\square_{2}	\square_3	\square_{4}
g)	Science is very relevant to me			\square_3	\square_{4}
h)	I find that science helps me to understand the things around me			\square_3	4
i)	Advances in science and technology usually bring social benefits	\square_{1}	\square_{2}	\square_3	4
j)	When I leave school there will be many opportunities for me to use science			\square_3	\square_{4}

Q19 How often do you do these things?

		Very Often	Regularly	Sometimes	Never or hardly ever
a)	Watch TV programs about science	$\square_{_{1}}$	\square_{2}	\square_3	\square_{4}
b)	Borrow or buy books on science topics				
c)	Visit web sites about science topics	$\square_{\mathbf{i}}$		\square_3	4
d)	Listen to radio programs about advances in science	\square_{i}		\square_3	4
e)	Read science magazines or science articles in newspapers	$\Box_{\mathbf{i}}$	\square_{2}	\square_3	\square_{4}
f)	Attend a science club	\Box_{i}			

Q20 Here is a list of science topics. From which source(s) did you mainly learn about each of these topics?

(Please check as many boxes as apply in each row)

	None of these, I am not sure what this is	My school	The TV, radio, newspaper or magazines	My friends	My family	The Internet or books
a) Photosynthesis	$\square_{_{1}}$	$\square_{\scriptscriptstyle 1}$	$\square_{\scriptscriptstyle 1}$	$\square_{\mathbf{i}}$	$\square_{\scriptscriptstyle 1}$	\square_{1}
b) Formation of the continents						$\square_{_{1}}$
c) Genes and chromosomes	\Box_{i}	. []		$\square_{\mathbf{i}}$		
d) Soundproofing	\square_1	\Box_{i}			\Box_{i}	$\square_{_{1}}$
e) Climate change		$\square_{\mathbf{i}}$			\Box_{i}	
f) Evolution	$\square_{_{1}}$	\square_1		$\Box_{\mathbf{i}}$		
g) Nuclear energy		$\square_{_{1}}$	\Box_{1}		\square_{1}	$\square_{\mathbf{i}}$
h) Health and nutrition	Ξ,					

Q21 How much interest do you have in learning about the following science topics?

	High Interest	Medium Interest	Low Interest	No Interest
a) Topics in physics	$\square_{_{1}}$		\square_3	
b) Topics in chemistry	$\square_{_{1}}$	\square_{2}	\square_3	$\square_{\scriptscriptstyle 4}$
c) The biology of plants	$\square_{_{1}}$	${\textstyle \bigsqcup}_{2}$	\square_3	. 🗀 ₄
d) Human biology		\square_{2}	\square_3	4
e) Topics in astronomy			\square_3	4
f) Topics in geology	$\square_{_1}$		\square_3	\square_{4}
g) Ways scientists design experiments			\square_3	\square_{4}
h) What is required for scientific explanations		\Box_2	\Box_{3}	

SECTION 4: THE ENVIRONMENT

Q22 How informed are you about the following environmental issues?

		I have never heard of this	I have heard about this but I would not be able to explain what it is really about	I know something about this and could explain the general issue	I am familiar with this and I would be able to explain this well
a)	The increase of greenhouse gases in the atmosphere				
b)	Use of genetically modified organisms	$\square_{_{1}}$		\square_3	4
c)	Acid rain			\square_3	$\square_{\scriptscriptstyle 4}$
d)	Nuclear waste	\square_1		\square_3	\square_{4}
e)	The consequences of clearing forests for other land use			\square_3	4

Q23 From which source(s) did you <u>mainly</u> learn about each of these environmental issues?

(Please check as many boxes as apply in each row)

	_	None of these, I am not sure what this is	My school	The TV, radio, newspaper or magazines	My friends	My family	The Internet or books
a)	Air pollution	$\square_{_{1}}$				\Box_{1}	
b)	Energy shortages		\Box_{i}			\Box_1	
c)	Extinction of plants and animals	\Box_i					$\Box_{_{1}}$
d)	Clearing of forests for other land use						
e)	Water shortages			$\Box_{\mathbf{i}}$	\Box_{1}	\Box_{i}	\Box_{i}
f)	Nuclear waste						

Q24 Do you see the environmental issues below as a serious concern for yourself and/or others?

-	This is a serious concern for me personally as well as others	This is a serious concern for other people in my country but not me personally	This is a serious concern only for people in other countries	This is not a serious concern to anyone
a) Air pollution	$\square_{_1}$		3	. 4
b) Energy shortages			\square_3	4
c) Extinction of plants and animals			\square_3	4
d) Clearing of forests for other land use				4
e) Water shortages	$\Box_{\mathbf{i}}$	\square_{2}	\square_3	4
f) Nuclear waste			\square_3	\square_{4}

Q25 Do you think problems associated with the environmental issues below will improve or get worse over the next 20 years?

	Improve	Stay about the same	Get worse
a) Air pollution	$\square_{\mathbf{l}}$	\square_{2}	
b) Energy shortages	$\Box_{\mathbf{i}}$	\square_{2}	\square_3
c) Extinction of plants and animals			\square_3
d) Clearing of forests for other land use	\Box_i		
e) Water shortages		\square_{2}	
f) Nuclear waste			\square_3

Q26 How much do you agree with the statements below?

		Strongly agree	Agree	Disagree	Strongly disagree
a)	It is important to carry out regular checks on the emissions from cars as a condition of their use				4
b)	It disturbs me when energy is wasted through the unnecessary use of electrical appliances	$\Box_{_{1}}$			4
c)	I am in favor of having laws that regulate factory emissions even if this would increase the price of products	$\Box_{_{1}}$			
d)	To reduce waste, the use of plastic packaging should be kept to a minimum		$\square_{\mathbf{z}}$	\square_3	\square_{4}
e)	Industries should be required to prove that they safely dispose of dangerous waste materials	$\Box_{\mathbf{i}}$		\square_3	\square_{4}
f)	I am in favor of having laws that protect the habitats of endangered species	\Box_i	$\square_{\mathbf{z}}$	$\begin{bmatrix} \cdot \end{bmatrix}_3$	4
g)	Electricity should be produced from renewable sources as much as possible, even if this increases the cost	\Box_1	\square_{2}	\square_3	

SECTION 5: CAREERS AND SCIENCE

In this section we ask you questions about science-related careers. When thinking about what a science-related career might be, think of the many jobs that involve science—not just the traditional "scientist." Careers like engineer (involving physics), weather forecaster (involving earth science), optician (involving biology and physics), and medical doctors (involving the medical sciences) are all examples of science-related careers.

Q27 How much do you agree with the statements below?

		Strongly agree	Agree	Disagree	Strongly disagree
a)	The subjects <u>available</u> at my school provide students with the basic skills and knowledge for a science-related career	\square_1		\square_3	\square_{4}
b)	The science subjects at my school provide students with the basic skills and knowledge for many different careers.	\Box_1		\square_3	
c)	The subjects <u>I study</u> provide me with the basic skills and knowledge for a science-related career	$\square_{_1}$			4
d)	My teachers equip me with the basic skills and knowledge I need for a science-related career			\square_3	\square_{4}

Q28 How informed are you about these topics?

			Very well informed	Fairly informed	Not well informed	Not informed at all
	a)	Science-related careers that are available in the job market			\square_3	
	b)	Where to find information about science- related careers	\Box_{1}		\square_3	\square_{4}
	c)	The steps students need to take if they want a science-related career				
	d)	Employers or companies that hire people to work in science-related careers	\Box_{i}			$\square_{\scriptscriptstyle 4}$
Q29		How much do you agree with the		nts belo	w?	
		(Please check only one box in each row,)			
			Strongly agree	Agree	Disagree	Strongly disagree
	a)	I would like to work in a career involving science			\square_3	
	b)	I would like to study science after high school	\square_{i}			\square_{4}
	c)	I would like to spend my life doing advanced science			\square_3	\square_{4}
	d)	I would like to work on science projects as an adult			\square_3	\square_{4}
	58					12

Q30a	What kind of job do you expect years old?	to have when	you are a
	Write the job title	w	
Q30b	What is the highest grade or leve complete?	el of school y	ou expec
	(Please check only one box)		
	Less than high school	\square_{i}	
	High school		
	Vocational or technical certificate (such as cosmetology or auto mechanics)	\square_3	
	Associate's degree (2-year degree from a community college)	\square_{4}	
	Bachelor's degree (4-year college degree)	\square_{s}	
	Master's degree	\Box_6	,
	Doctoral or professional degree such as medicine or law		

SECTION 6: LEARNING TIME

Q31 How much time do you typically spend per week studying the following subjects?

For each subject, please indicate separately:

- the time spent attending <u>regular classes</u> at your school;
- the time spent attending <u>out-of-school-time lessons</u> (at school, at home or somewhere else);
- the time spent studying or doing homework by yourself.

	Science	No time	Less than 2 hours a week	2 or more but less than 4 hours a week	4 or more but less than 6 hours a week	6 or more hours a week
a)	Regular classes in science at my school	\Box_{1}		\square_3	\square_{4}	\square_{5}
b)	Out-of school-time lessons in science			\square_3	4	\square_{5}
c)	Study or homework in science by myself			\square_3	\square_{4}	
	Mathematics					
d)	Regular classes in mathematics at my school	$\square_{\mathbf{l}}$		\square_3	4	\square_{5}
e)	Out-of school-time lessons in mathematics	$\Box_{\mathbf{l}}$		\square_3	\square_{4}	
f)	Study or homework in mathematics by myself			\square_3	\square_{4}	\square_{5}

Q31 (continued)

	English Language and Literature	No time	Less than 2 hours a week	2 or more but less than 4 hours a week	4 or more but Tess than 6 hours a week	6 or more hours a week
g)	Regular classes in English at my school	· 🔲	\square_{2}	\square_3	4	\square_{5}
h)	Out-of school-time lessons in English			\square_3	4	\square_{5}
i)	Study or homework in English by myself			\square_3	$\square_{\scriptscriptstyle 4}$	\square_{5}
	Other subjects				12	/ *
j)	Regular classes in other subjects at my school			\square_3	4	$\square_{\mathfrak{s}}$
k)	Out-of-school-time lessons in other subjects	$\square_{\mathbf{i}}$		\square_3	4	\square_{s}
l)	Study or homework in other subjects by myself				\square_{4}	\square_{5}

Q32 What type of <u>out-of-school-time</u> lessons do you attend currently (if any)?

These are lessons in subjects that you are learning at school, that you spend extra time learning outside of normal school hours. The lessons might be held at your school, at your home or somewhere else. These are only lessons in subjects that you also learn at school.

	- 1	Yes	No
a)	One to one lessons with a teacher who is also a teacher at your school	\square_{i}	
	•		
b)	One to one lessons with a teacher who is <u>not</u> a teacher at your school	$\Box_{\mathbf{l}}$	
c)	Lessons in small groups (less than 8 students) with a teacher who is also a teacher at your school	$\Box_{\mathbf{i}}$	
d)	Lessons in small groups (less than 8 students) with a teacher who is <u>not</u> a teacher at your school	\square_{1}	
e)	Lessons in larger groups (8 students or more) with a teacher who is also a teacher at your school	$\Box_{\mathbf{l}}$	
f)	Lessons in larger groups (8 students or more) with a teacher who is not a teacher at your school		

SECTION 7: TEACHING AND LEARNING SCIENCE

Q33 Did you or do you take any of the courses listed below?

(Please check as many boxes as apply in each row)

	Last	Last year		year
-	Yes	No	Yes	No
a) A required general or integrated science course				
b) An optional general or integrated science course	\Box_{ι}			
c) A required biology course			\square_{1}	
d) An optional biology course	\square_1		\square_{1}	\square_{2}
e) A required physics course	$\square_{\scriptscriptstyle 1}$			
f) An optional physics course			$\Box_{\mathbf{i}}$	\square_{2}
g) A required chemistry course	$\square_{_1}$			\square_2
h) An optional chemistry course	$\square_{\mathbf{i}}$		$\square_{_1}$	

Q34 When learning science topics at school, how often do the following activities occur?

					Never
		In all lessons	In most lessons	In some lessons	or hardly ever
a)	Students are given opportunities to explain their ideas	$\square_{\mathbf{i}}$		\square_3	4
b)	Students spend time in the laboratory doing practical experiments	$\square_{\scriptscriptstyle 1}$		\square_3	. 🔲 4
c)	Students are required to design how a science question could be investigated in the laboratory	\Box_{1}			\square_{4}
d)	The students are asked to apply a science concept to everyday problems	\square_{1}	\square_{2}	\square_3	$\square_{\scriptscriptstyle 4}$
e)	The lessons involve students' opinions about the topics			\square_3	$\square_{\!\scriptscriptstyle 4}$
f)	Students are asked to draw conclusions from an experiment they have conducted				
g)	The teacher explains how a science idea can be applied to a number of different phenomena (e.g., the movement of objects, substances with similar properties)			\square_3	\square_{4}
h)	Students are allowed to design their own experiments	\Box_{1}	\square_2	\square_3	\square_{4}

Q34 (continued)

		In all lessons	In most lessons	In some lessons	Never or hardly ever
i)	There is a class debate or discussion	$\square_{_1}$	\square_{2}		[]4
j)	Experiments are done by the teacher as demonstrations	$\Box_{\mathbf{i}}$		\square_3	
k)	Students are given the chance to choose their own investigations			\square_3	. 🗀 4
1)	The teacher uses science to help students understand the world outside school	$\Box_{\mathbf{i}}$		\square_3	
m)	Students have discussions about the topics				
n)	Students do experiments by following the instructions of the teacher			\square_3	
0)	The teacher clearly explains the relevance of science concepts to students' lives	$\Box_{\mathbf{i}}$	\square_{2}	\square_3	
p)	Students are asked to do an investigation to test out their own ideas	\Box_{1}	\square_{2}	\square_3	
q)	The teacher uses examples of technological application to show how science is relevant to society			\square_3	

Q35 How much do you agree with the statements below?

			S	Strongly agree	Agree	Disagree	Strongly disagree
	a)	Making an effort in my science class(e worth it because this will help me in the work I want to do later on					4
	b)	What I learn in my science class(es) is important for me because I need this for what I want to study later on				\square_3	4
	c)	I study science because I know it is use for me	eful	$\square_{\mathbf{i}}$		\square_3	
	d)	Studying science is worthwhile for me because what I learn will improve my prospects			\square_2	\square_3	
	e)	I will learn many things in my science class(es) that will help me get a job		$\square_{\mathbf{i}}$		\square_3	
Q36		In general, how important de the subjects below?	o you th	nink it i	s for y	ou to do	well in
		(Please check only one box in each	ch row)				
			Very important	Impor		A little i	Not important at all
	a)	Science	\square_1		2	\square_3	4
33	b)	Mathematics	\square_{i}		2	\square_3	\square_{4}
	c)	English			2	\square_3	\square_{4}
							V., t
		3	2				

Q37 The following question asks about your experience in learning science.

How much do you agree with the statements below?

(Please check only one box in each row)

		Strongly agree	Agree	Disagree	Strongly disagree
a)	Learning advanced science would be easy for me	\Box_{1}	\square_{2}	\square_3	\square_{4}
b)	I can usually give good answers to test questions in science				· 🔲 4
c)	I learn science quickly	$\square_{_1}$		\square_3	\square_{4}
d)	Science is easy for me	$\square_{_{1}}$		\square_3	
e)	When I am being taught science, I can understand the concepts very well				\square_{4}
f)	I can easily understand new ideas in science		\square_{2}	\square_3	4

Thank you very much for your co-operation in completing this questionnaire!

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